Bibliography of Research Applications Using VA National Outpatient Data

Veterans Affairs Information Resource Center
VA Information Resource Center (VIReC), Building 1, Room C303,
Hines VA Hospital (151V), 5th Avenue & Roosevelt Road, Hines, IL 60141-5000
E-mail:virec@research.hines.med.va.gov

Introduction

VA Information Resource Center (VIReC) has developed a New Data User Tool Kit to assist new health services researchers and other new VA data users.

Below is a bibliography relating to VA inpatient databases that researchers may reference in their own research.

The list was compiled from PubMed (http://www.ncbi.nlm.nih.gov/PubMed/) by VIReC staff using "inpatient + database + veterans" as keyword search terms. **The search was performed September 2002.**

The list is organized by:
-**Author(s)**
-*Title*
-Medline Journal Abbreviation
-Publisher
-Abstract
-Link to PubMed entry with abstract ID, MeSH terms, and related articles

Bibliography of Research Applications Using VA National Outpatient Databases

Research Application Using VA National Databases

Andrews RD, Beauchamp C.
A clinical database management system for improved integration of the Veterans Affairs Hospital Information System. J Med Syst 1989; 13(6):309-320.

Abstract: The Department of Veterans Affairs (VA) Decentralized Hospital Computer Program (DHCP) contains data modules derived from separate ancillary services (e.g., Lab, Pharmacy and Radiology). It is currently difficult to integrate information between the modules. A prototype is being developed aimed at integrating ancillary data by storing clinical data oriented to the patient so that there is easy interaction of data from multiple services. A set of program utilities provides for user-defined functions of decision support, queries, and reports. Information can be used to monitor quality of care by providing feedback in the form of reports, and reminders. Initial testing has indicated the prototype's design and implementation are feasible (in terms of space requirements, speed, and ease of use) in outpatient and inpatient settings. The design, development, and clinical use of this prototype are described.
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=2636966&dopt=r

Andrus CH, Johnson K, Pierce E, Romito PJ, Hartel P, Berrios-Guccione S et al.
Finance modeling in the delivery of medical care in tertiary-care hospitals in the Department of Veterans Affairs.
J Surg Res 2001; 96(2):152-157.

Abstract: BACKGROUND: In the mid-1990s, the Department of Veterans Affairs (DVA) implemented the Veterans Equitable Resource Allocation (VERA), a new financial model developed to attempt to better distribute the approximately $18 billion annual budget among roughly 170 Veterans Administration Medical Centers (VAMCs). VERA is based on a Health Maintenance Organization (HMO) model. VERA provides reimbursement to each of the 22 regional Veterans Integrated Service Networks (VISNs), and subsequent VISN distribution to individual VAMCs is based on an individual medical center's enrollment of unique social security numbers (uniques). In HMO vocabulary these are individual "covered lives." METHODS: Currently available demographic and staffing information regarding the DVA's 23 tertiary hospital systems (Category 7 hospitals) on the KLF database (DVA Austin Data Base) and published information on the DVA website were reviewed. The following was obtained: (1) staffing information-physician and nurse full-time employment equivalent (FTEE) staffing; (2) patient demographics and hospital workload-facility uniques (u), outpatient facility uniques, average daily census (ADC), discharges, and outpatient clinic visits. The following staffing ratios were calculated for both physician and nursing: FTEE/(u/1000), FTEE/(discharges/1000), FTEE/(clinic visits/1000), FTEE/ADC. For all categories the means +/- SD were calculated and correlation coefficients were calculated on pertinent pairings. RESULTS: Although categorized as similar tertiary care facilities, the 23 "Group 7" VA hospitals are anything but equivalent when reviewed using the VERA financing model with respect to physician staffing, nurse staffing, and facility uniques. Using VERA methodology, average physician FTEE and total nursing FTEE staffing/(u/1000) are 3.67 +/- 0.89 and 15.53 +/- 3.77, respectively. Correlation statistics of staffing versus unique SSNs demonstrated correlation coefficients of 0.46 and 0.59 with respect to physician and nurse staffing, respectively. On the other hand, when physician FTEE and nursing FTEE staffing were compared with VAMC workload parameters (total ADC, discharges, and outpatient visits), correlation coefficients were more consistent, ranging from 0.62 to 0.86. CONCLUSIONS: In the VERA model, the reward of a larger annual budget for an individual VAMC or the regional VISN is realized when staffing of VAMCs is minimized, overall provided medical services (especially costly tertiary services) are limited, and the number of covered lives is maximized. A VAMC staffing system that equates medical services delivered in a tertiary VAMC setting based on an HMO model like VERA (where the user population is skewed toward the sicker, older patient) shows decreased correlation when compared with VAMC workload model parameters
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11266266&dopt=r

Ashton CM, Petersen NJ, Wray NP, Yu HJ.
The Veterans Affairs medical care system: hospital and clinic utilization statistics for 1994.
Med Care 1998; 36(6):793-803.

Abstract: OBJECTIVES: The authors describe the role the Veterans Affairs (VA) medical system plays as a provider of clinic and hospital services by examining utilization levels and users' characteristics. METHODS: The Veterans Affairs hospital discharge database, the Veterans Affairs outpatient clinic files, and the veteran population files were used to estimate the number of persons using the Veterans Affairs medical care system in 1994 and the intensity of their clinic and hospital use. Demographic and clinical characteristics of users were tabulated. RESULTS: In 1994, 2.7 million veterans, 10.3% of all US veterans, and approximately 23% of veterans who would have met the statutory eligibility requirements for Veterans Affairs care, used the hospital and/or clinic components of the Veterans Affairs medical system. Sixty- three percent of the system's users were younger than age 65, and 10.5% were women. These 2.7 million veterans had 901,665 Veterans Affairs hospital stays, 15.5 million bed-days, and 31.2 million outpatient visits in fiscal year 1994. The average number of hospitalizations per hospital user was 1.71; the average number of visits per clinic user was 11.7. Medical, surgical, and psychiatric diagnosis-related groups (DRGs) accounted for 56%, 21%, and 23%, respectively, of hospitalizations, but psychiatric diagnosis-related groups accounted for 43% of all inpatient days. Principal medicine clinic visits and psychiatry clinic visits accounted for 21% and 16% of Veterans Affairs ambulatory care. CONCLUSIONS: Because the patient population served by the Veterans Affairs system is skewed in a number of ways, its contribution as a provider of health services in the United States varies by gender, age, socioeconomic status, and diagnosis
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=9630121&dopt=r

Au DH, Curtis JR, Every NR, McDonell MB, Fihn SD.
Association between inhaled beta-agonists and the risk of unstable angina and myocardial infarction.
Chest 2002; 121(3):846-851.

Abstract: BACKGROUND: beta-Adrenoceptor agonists (beta-agonists) are commonly used to treat obstructive lung diseases, and preliminary studies have suggested they are associated with an increased risk of adverse cardiovascular outcomes. We further examined the association between acute coronary syndromes and inhaled beta-agonist therapy. METHODS: We performed a nested, case-control study using data that were collected as part of a larger, ongoing, prospective study of quality improvement in the primary care clinics of seven Veterans Administration Medical Centers. We identified 630 patients with unstable angina or acute myocardial infarction hospitalized between 1996 and 1999. We frequency matched these case patients to 10,486 control subjects according to clinic location, and randomly assigned each an "index date." The computerized pharmacy database at each center was used to ascertain beta-agonist use. Cardiovascular risk factors were assessed from mailed questionnaires and electronic medical records, which included inpatient and outpatient diagnoses, medications, and laboratory results. RESULTS: In comparison with patients who had not filled a beta-agonist prescription during the 90 days prior to their index date, patients who had filled a beta-agonist prescription had an increased risk of experiencing an acute coronary syndrome. The increased risk of an acute coronary syndrome persisted after adjusting for age and cardiovascular risk factors, including hypertension, diabetes, and smoking history. Moreover, there was a dose-response relationship with an adjusted odds ratio (OR) of 1.38 for one to two metered-dose inhaler (MDI) canisters (95% confidence interval [CI], 0.86 to 2.23), an OR of 1.57 for three to five MDI canisters (95% CI, 1.01 to 2.46), and an OR of 1.93 for six or more MDI canisters (95% CI, 1.23 to 3.03). After stratifying for receipt of a beta-blocker prescription, the adjusted OR in subjects who did not receive a beta-blocker was 1.55 for one to two MDI canisters (95% CI, 0.60 to 3.99), an OR of 4.07 for three to five canisters (95% CI, 2.17 to 7.64), and an OR of 3.83 for six or more canisters (95% CI, 2.02 to 7.29). Subjects who had received both beta-blockers and beta- agonists had no increase in risk in acute coronary syndromes unless they had filled six or more beta-agonist MDI canisters. CONCLUSIONS: A prescription for inhaled beta-agonists may increase the risk of myocardial infarction and unstable angina in patients with COPD
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11888971&dopt=r

Barnett PG, Rodgers JH.
Use of the Decision Support System for VA cost-effectiveness research.
Med Care 1999; 37(4 Suppl Va):AS63-AS70.

Abstract: BACKGROUND: The Department of Veterans Affairs is adopting the Decision Support System (DSS), computer software and databases which include a cost-accounting system which determines the cost of health care products and patient encounters. OBJECTIVES: A system for providing cost data for cost-effectiveness analysis should be provide valid, detailed, and comprehensive data that can be aggregated. METHODS: The design of DSS is described and compared with those criteria. Utilization data from DSS was compared with other VA utilization data. Aggregate DSS cost data from 35 medical centers was compared with relative resource weights developed for the Medicare program. RESULTS: Data on hospital stays at 3 facilities found that 3.7% of the stays in DSS were not in the VA discharge database, whereas 7.6% of the stays in the discharge data were not in DSS. DSS reported between 68.8% and 97.1% of the outpatient encounters reported by six facilities in the ambulatory care data base. Relative weights for each Diagnosis Related Group based on DSS data from 35 VA facilities correlated with Medicare weights (correlation coefficient of .853). CONCLUSIONS: DSS will be useful for research if certain problems are overcome. It is difficult to distinguish long-term from acute hospital care. VA does not have a complete database of all inpatient procedures, so DSS has not assigned them a specific cost. The authority to access encounter-level DSS data needs to be centralized. Researchers can provide the feedback needed to improve DSS cost estimates. A comprehensive encounter-level extract would facilitate use of DSS for research
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10217386&dopt=r

Bauer MS, Kirk GF, Gavin C, Williford WO.
Determinants of functional outcome and healthcare costs in bipolar disorder: a high-intensity follow-up study.
J Affect Disord 2001; 65(3):231-241.

Abstract: BACKGROUND: Review of published studies reveals few data regarding determinants of the poor functional outcome and high healthcare costs that are characteristic of bipolar disorder. In order to identify potential mechanisms, critical to designing optimal treatment strategies, this longitudinal study investigated (a) the degree to which disease outcome is correlated with functional outcome and direct treatment costs, and (b) whether similar demographic or clinical characteristics predict disease and functional outcome and healthcare costs. METHODS: Disease and functional outcome were assessed in bimonthly structured interviews over 48 weeks in 43 outpatient veterans with bipolar disorder. Direct mental health treatment costs from the VA perspective were determined from the VA database and patient interview. Regression analysis was used to determine association among the three outcome domains, and to identify clinical or demographic variables that predicted each of the three domains. RESULTS: Functional outcome was correlated with depressive, but not manic, symptoms during follow-up. Costs were not correlated with any measure of disease or functional outcome. Several demographic, but not clinical, characteristics predicted functional outcome. In contrast, several clinical, but not demographic, characteristics predicted symptom status. No predictors were associated with direct treatment costs. LIMITATIONS: Subjects were predominantly male veterans of relatively homogeneous social class, followed prospectively for approximately one year in a clinic designed specifically to minimize barriers to care. CONCLUSIONS: Data from this and prior studies indicate that ongoing depressive symptoms are strongly associated with functional outcome, although substantial variance remains unexplained. Optimal models to explain functional outcome and healthcare costs will need to address factors besides simply disease severity and chronicity. The authors present a heuristic paradigm for understanding both the research and therapeutic aspects of these findings
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11511403&dopt=r

Berlowitz DR, Young GJ, Brandeis GH, Kader B, Anderson JJ.
Health care reorganization and quality of care: unintended effects on pressure ulcer prevention.
Med Care 2001; 39(2):138-146.

Abstract: BACKGROUND: Health care reorganizations, with a change in focus from inpatient to outpatient care, are becoming increasingly frequent. Little is known regarding how reorganizations may affect risk-adjusted outcomes for those programs, usually inpatient, that lose resources as a result of the change in organizational focus. OBJECTIVES: To determine changes in risk-adjusted rates of pressure ulcer development over an 8-year period, the final 3 of which were characterized by a significant reorganization of the health care system. DESIGN: This was an observational study that used an existing database. SUBJECTS: Subjects were residents of Department of Veterans Affairs long-term care units between 1990 and 1997 who were without a pressure ulcer at an index assessment. MEASURES: The study examined risk-adjusted rates of pressure ulcer development, and proportions of new ulcers that were severe (stages 3 or 4) were calculated for successive 6-month periods. RESULTS: Between 1990 and 1994, risk-adjusted rates of pressure ulcer development declined significantly, by 27%. However, beginning in 1995, rates began to increase, and in 1997 they were similar to those in 1990. The proportion of new ulcers that were severe increased significantly over time (P = 0.01). CONCLUSIONS: The reorganization of the VA that began in 1995, with its emphasis on outpatient care, was associated with an increase in rates of pressure ulcer development. This highlights the need to carefully monitor the quality of care in programs that may be losing resources as a result of the reorganization
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11176551&dopt=r

Chen RS, Nadkarni PM, Levin FL, Miller PL, Erdos J, Rosenheck RA.
Using a computer database to monitor compliance with pharmacotherapeutic guidelines for schizophrenia. Psychiatr Serv 2000; 51(6):791-794.

Abstract: OBJECTIVE: The study examined whether prescription data from a computerized database could be used to measure conformance with treatment recommendations of the Schizophrenia Patient Outcomes Research Team (PORT). METHODS: Records of an academically affiliated Veterans Affairs medical center were reviewed to identify patients who were hospitalized for schizophrenia and later seen for at least two outpatient visits in the six months after discharge (N=353). RESULTS: Conformance with only three of the 18 PORT pharmacotherapeutic recommendations could be measured with the available data. In regard to the recommendation to use antipsychotics other than clozapine as first- line treatments in acute episodes, 77 percent of the sample filled a prescription for an antipsychotic during the

acute episode. Of these, only 6 percent received an antipsychotic regimen that included clozapine. In regard to the PORT recommendation on dosage during acute symptom episodes, 42 percent of the patients on conventional antipsychotics received dosages below the recommended range, 5 percent were above the range, and 53 percent were within it. In contrast, of the 53 patients who received clozapine or risperidone, 87 percent received prescriptions within the recommended dosage range. As for the recommendation to offer a trial of clozapine to patients who do not respond to adequate trials of two different classes of conventional drugs, 10 percent of patients who were switched from conventional regimens to clozapine were receiving dosages of conventional medications below the recommended range. CONCLUSIONS: Patient prescription data can provide preliminary measures to cost-effectively assess conformance with treatment. However, the approach has several limitations, and complementary analyses would enhance its usefulness
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10828112&dopt=r

Chen RS, Rosenheck R.
Using a computerized patient database to evaluate guideline adherence and measure patterns of care for major depression.
J Behav Health Serv Res 2001; 28(4):466-474.

Abstract: This study examined the translation of recommendations from the Agency for Health Care Policy and Research (AHCPR) guidelines for major depression into measures derived from a computerized database to assess guideline conformance and patterns of care for major depression. Patients (n = 208) were identified who were hospitalized for major depression and had two or more outpatient mental health appointments within 6 months of discharge from an academically affiliated Veterans Affairs Medical Center. Measures were based on AHCPR guideline recommendations or developed independently. Conformance could be measured for three guideline recommendations. Of patients on single- agent antidepressant therapy, 87% received dosages within the recommended range. Sixty-nine percent received the recommended number of follow-up visits. Specific condition-related treatment interventions were identified in 32% of patients with concurrent alcoholism. Dual diagnoses of depression and drug or alcohol abuse were not deterrents to prescribing benzodiazepines. Despite its limitations, computerized database analyses provided efficient measures of guideline adherence
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11732248&dopt=r

Dayhoff R, Kirin G, Pollock S, Miller C, Todd S.
Medical data capture and display: the importance of clinicians' workstation design.
Proc Annu Symp Comput Appl Med Care 1994;541-545.

Abstract: The Department of Veterans Affairs is developing, testing and evaluating the benefits of physicians' workstations as an aid to medical data capture in an outpatient clinic setting. The physician's workstation uses a graphical user interface to aid the clinician in recording encounter data. Various input devices including keyboard, mouse, pen, voice, barcode reader, and tablet are available on the workstations, and user preferences will be examined. Access to general services such as electronic mail and reference databases is also available. The workstation provides a wide variety of patient specific data from the hospital information system, including image data. The single data collection process by the clinician will also provide data for the cost recovery process
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=7949987&dopt=r

Denwood R.
Data capture for quality management nursing opportunity.
Comput Nurs 1996; 14(1):39-44.

Abstract: It is predicted that by the year 2000, with or without national health care reform, outpatient services may account for nearly half of a hospital's net revenues. As greater emphasis is placed on outpatient care it is imperative that data collection tools be developed that will not only evaluate the quality of care but also include data to measure administrative interests. The Hines VA, in conjunction with the Minneapolis VA, adapted a simple, computerized information collection system known as PANDAS. This article discusses the various technologies available for data

collection; the criteria used in the selection of discrete optical mark reading technology; the development of an out-patient database for ambulatory care encounters; and the opportunities that exist for extracting data to examine and trend nursing activities, and developing outcome criteria for patient care
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=8605659&dopt=r

Desai MM, Rosenheck RA, Druss BG, Perlin JB.
Receipt of nutrition and exercise counseling among medical outpatients with psychiatric and substance use disorders.
J Gen Intern Med 2002; 17(7):556-560.

Abstract: OBJECTIVE: Mentally ill persons represent a population that is potentially vulnerable to receiving a poorer quality of medical care. This study examines the relationship between mental disorders and the likelihood of receiving recommended nutrition and exercise counseling. DESIGN: Cross-sectional study combining chart-review data and administrative database records. SETTING: One hundred forty-seven Veterans Affairs (VA) medical centers nationwide. PATIENTS/PARTICIPANTS: The sample included 90,240 patients with obesity and/or hypertension who had >/=3 medical outpatient visits in the previous year. MEASUREMENTS AND MAIN RESULTS: The outcomes of interest were chart-documented receipt of nutrition counseling and receipt of exercise counseling in the past 2 years. This chart information was merged with VA inpatient and outpatient administrative databases, which were used to identify persons with diagnosed mental disorders. Most patients received nutrition counseling (90.4%), exercise counseling (88.5%), and counseling for both (85.7%) in the past 2 years. The rates of counseling differed significantly but modestly by mental health status. The lowest rates were found among patients dually diagnosed with comorbid psychiatric and substance use disorders; however, the magnitude of the disparities was small, ranging from 2% to 4% across outcomes. These results were unchanged after controlling for demographics, health status, and facility characteristics using multivariable generalized estimating equation modeling. CONCLUSIONS: Among patients engaged in active medical treatment, rates of nutrition and exercise counseling were high at VA medical centers, and the diagnosis of mental illness was not a substantial barrier to such counseling. More work is needed to determine whether these findings generalize to non-VA settings and to understand the potential role that integrated systems such as the VA can play in reducing disparities for vulnerable populations
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=12133146&dopt=r

Dolder CR, Lacro JP, Dunn LB, Jeste DV.
Antipsychotic medication adherence: is there a difference between typical and atypical agents?
Am J Psychiatry 2002; 159(1):103-108.

Abstract: OBJECTIVE: Pharmacy refill records were used to compare medication adherence in outpatient veterans receiving typical versus atypical antipsychotic medications. METHOD: Consecutive patients meeting selection criteria and receiving prescriptions for haloperidol (N=57), perphenazine (N=60), risperidone (N=80), olanzapine (N=63), and quetiapine (N=28) over a 3-month period were identified from a computerized database. The hospital policy at the time of this study required failure in trials of at least two typical antipsychotics before initiation of an atypical agent. Patients' adherence with the antipsychotic regimen was calculated by analyzing refill records for up to 12 months. The cumulative mean gap ratio (the number of days when medication was unavailable in relation to the total number of days) and the compliant fill rate (the number of prescription fills indicating adherence in relation to the total number of prescription fills) at 6 and 12 months were calculated. RESULTS: Adherence rates at 6 and 12 months were moderately higher in patients who received atypical antipsychotics than in those who received typical agents. Cumulative mean gap ratios were 23.2% for typical and 14.1% for atypical antipsychotics at 12 months; thus, patients who received typical agents were without medication for an average of 7 days per month, compared with 4 days per month for those who received atypical agents. At 12 months, compliant fill rates were 50.1% for typical and 54.9% for atypical antipsychotics. CONCLUSIONS: Interventions to improve adherence are warranted even for patients who receive atypical antipsychotic medications
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11772697&dopt=r

Dominitz JA, Maynard C, Boyko EJ.
Assessment of vital status in Department of Veterans Affairs national databases. comparison with state death certificates.
Ann Epidemiol 2001; 11(5):286-291.

Abstract: PURPOSE: To determine the extent to which Department of Veterans Affairs (VA) database vital status information agrees with Washington state death certificates. METHODS: Using each data source, vital status was determined for 19,481 Washington state resident veterans hospitalized in Washington VA hospitals from 1994 to 1997, and for 33,602 Washington state resident veterans who were seen as outpatients during 1997. RESULTS: The agreement between VA and Washington state records was excellent for hospitalized veterans (kappa = 0.91, $p < 0.0001$). Three thousand one hundred-eight individuals (86.2% of all deaths) appeared in both files. Of those deaths missing in the VA files, 71% had no service-connected disability, VA pension, or other compensation. Among outpatients, agreement between the death files was very good (kappa = 0.82, $p < 0.001$). Three hundred seventy-two individuals (69.8% of all deaths) appeared in both files. Of those deaths missing in the VA files, 63% had no service-connected disability or VA pension or other compensation. CONCLUSIONS: The VA death files are a valid source of vital status information for veterans hospitalized in recent years. For veterans having exclusively outpatient visits, however, the VA files miss a substantial proportion of deaths. For these patients, alternative means of vital status ascertainment are warranted
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11399441&dopt=r

Druss B, Rosenheck R.
Evaluation of the HEDIS measure of behavioral health care quality. Health Plan Employer Data and Information Set.
Psychiatr Serv 1997; 48(1):71-75.

Abstract: OBJECTIVE: The Health Plan Employer Data and Information Set (HEDIS) is the most widely used "report card" system comparing health care plans across different dimensions of performance. HEDIS uses only one measure of the quality of behavioral health care-the rate of follow-up after hospitalization for major affective disorder. This study used data from a national Veterans Affairs database to evaluate the generalizability of the HEDIS behavioral health quality measure. METHODS: Using administrative data from a nationwide sample of 114 VA hospitals, the HEDIS (version 2.5) quality measure was compared with several related performance measures including readmission rates and outpatient follow- up rates for other psychiatric disorders and for substance use disorders. The magnitude and statistical significance of Pearson's r value for correlation between measures was calculated. RESULTS: The HEDIS measure was moderately correlated with 30-day follow-up after hospitalization for other psychiatric disorders and with other performance measures of outpatient care. However, it was poorly correlated with follow-up for substance use disorders, inpatient measures including readmission rates, and several other measures of quality. CONCLUSIONS: Caution is needed in drawing conclusions about the quality of behavioral health plans based on the single measure used in HEDIS, version 2.5. Inclusion of other performance measures may be warranted
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=9117504&dopt=r

El Serag HB, Sonnenberg A.
Outcome of erosive reflux esophagitis after Nissen fundoplication.
Am J Gastroenterol 1999; 94(7):1771-1776.

Abstract: OBJECTIVE: The aim of this study was to compare the utilization of health care resources and long term outcome of erosive esophagitis in patients treated with and without open Nissen fundoplication. METHODS: A population of 35,725 patients with erosive esophagitis was extracted from the computerized database of the US Department of Veterans Affairs. Subjects were stratified by severity of disease into erosive esophagitis alone versus erosive esophagitis complicated by esophageal ulcers or peptic strictures. During a mean follow-up period of 4.2 yr (range 1-12 yr), the consumption of health care resources, except for medications, was compared between case and control subjects treated with and without fundoplication, respectively. RESULTS: Among patients with complicated erosive esophagitis, 5,064 control subjects were treated without, and 542 case subjects were treated with, fundoplication. Cases incurred less recurrence of esophageal erosions (controls: 56% vs cases: 46%), esophageal ulcers (38% vs 33%), and peptic strictures (43% vs 32%) during follow-up. Among patients with erosive esophagitis but no

complications, 29,514 control subjects were treated without, and 605 case subjects were treated with, fundoplication. Cases did not experience any change in the recurrence of esophageal erosions (controls: 25% vs cases: 24%). Irrespective of treatment type, none of the case or control subjects with erosive esophagitis alone developed esophageal ulcers or peptic strictures during follow-up. Compared with controls, however, after fundoplication in erosive esophagitis alone, cases incurred more dysphagia (2.6% vs 4.6%), postsurgical syndromes (0.8% vs 1.7%), as well as more outpatient visits (34 vs 40 visits/patient) and outpatient procedures (2.7 vs 4.3 procedures/patient). CONCLUSIONS: Fundoplication improves the clinical outcome of erosive esophagitis in patients with concomitant esophageal ulcers and strictures, but not in patients without such complications. Fundoplication does not reduce the consumption of health care resources
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10406233&dopt=r

El Serag HB, Richardson PA, Everhart JE.
The role of diabetes in hepatocellular carcinoma: a case-control study among United States Veterans.
Am J Gastroenterol 2001; 96(8):2462-2467.

Abstract: OBJECTIVE: Diabetes mellitus (DM) has been reported to increase the risk of hepatocellular carcinoma (HCC). We carried out a case-control study to examine the role of DM while controlling for several known risk factors of HCC. METHODS: All hospitalized patients with primary liver cancer (PLC) during 1997-1999 were identified in the computerized database of the Department of Veterans Affairs, the Patient Treatment File. Controls without cancer were randomly assigned from the Patient Treatment File during the same time period. The inpatient and outpatient files were searched for several conditions including DM, hepatitis C virus (HCV), hepatitis B virus (HBV), alcoholic cirrhosis, autoimmune hepatitis, hemochromatosis, and nonspecific cirrhosis. Adjusted odds ratios (OR) were calculated in a multivariable logistic regression model. RESULTS: We identified 823 patients with PLC and 3459 controls. The case group was older (62 yr [+/-10] vs 60 [+/-11], $p < 0.0001$), had more men (99% vs 97%, 0.0004), and a greater frequency of nonwhites (66% vs 71%, 0.0009) compared with controls. However, HCV- and HBV-infected patients were younger among cases than controls. Risk factors that were significantly more frequent among PLC cases included HCV (34% vs 5%, $p < 0.0001$), HBV (11% vs 2%, $p < 0.0001$), alcoholic cirrhosis (47% vs 6%, $p < 0.0001$), hemochromatosis (2% vs 0.3%, $p < 0.0001$), autoimmune hepatitis (5% vs 0.5%, $p < 0.0001$), and diabetes (33% vs 30%, $p = 0.059$). In the multivariable logistic regression, diabetes was associated with a significant increase in the adjusted OR of PLC (1.57, 1.08-2.28, $p = 0.02$) in the presence of HCV, HBV, or alcoholic cirrhosis. Without markers of chronic liver disease, the adjusted OR for diabetes and PLC was not significantly increased (1.08, 0.86-1.18, $p = 0.4$). There was an increase in the HCV adjusted OR (17.27, 95% Cl = 11.98-24.89) and HBV (9.22, 95% CI = 4.52-18.80) after adjusting for the younger age of HCV- and HBV-infected cases. The combined presence of HCV and alcoholic cirrhosis further increases the risk with an adjusted OR of 79.21 (60.29-103.41). The population attributable fraction for HCV among hospitalized veterans was 44.8%, whereas that of alcoholic cirrhosis was 51%. CONCLUSION: DM increased the risk of PLC only in the presence of other risk factors such as hepatitis C or B or alcoholic cirrhosis. Hepatitis C infection and alcoholic cirrhosis account for most of PLC among veterans
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11513191&dopt=r

Forneris CA, Bosworth HB, Butterfield MI.
Outpatient care use among female veterans: differences between mental health and non-mental health users.
Mil Med 2002; 167(1):10-13.

Abstract: We examined the influence of mental health service use on outpatient health service use among female veterans. We conducted a retrospective and correlational study of treatment-seeking women and their pattern of health service use and the relationship between mental health and somatoform symptoms and service use. Data were obtained from a self- report measure designed to screen for mental and somatoform symptoms and from a federally maintained database of all outpatient contacts. Women who used mental health services were more likely to have a greater number of non-mental health visits than women who did not. The most commonly endorsed somatoform symptoms were feeling tired or having low energy and pain in extremities and joints. These symptoms were correlated with non-mental health service use, as were back pain, menstrual pain or problems, and trouble sleeping. We conclude that a history of somatoform symptoms might increase rates of health service use despite treatment for mental problems
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11799806&dopt=r

Haynes LM, Patterson AA, Wade SU.
Drug information resources in the Veterans Affairs healthcare system.
Hosp Pharm 1995; 30(4):297-301.

Abstract: Results of a survey characterizing drug information services and resources from a defined practice area are presented. At the end of 1992, a questionnaire was mailed to 167 Veterans Affairs Medical Centers and Outpatient Clinics. One hundred fifty-one of the surveys (> 90%) were completed and analyzed. The knowledge obtained from this survey may provide a basis for future development of an essential clinical service within the Veterans Affairs health care system
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10141871&dopt=r

Hiatt JF.
PC-based application programs in large health care systems.
J Med Syst 1992; 16(1):15-30.

Abstract: Public health care agencies lack the infrastructure to meet the increasing operational demands on them, but there is little comparative data on alternative operational structures and systems from which to formulate remedies. Improved information management systems could help address both the workload and the gathering of critically needed data. PC-based database and application programs (PC-APs) that communicate with the mainframe are proposed as a methodology for filling the information-processing gap between mainframe computing and manual information systems. We also propose a model for systematic study of information management systems in clinical settings which can be used to evaluate other aspects of clinical program operations as well. A pilot study demonstrating these methodologies suggests that this is a fruitful approach to assessing ambulatory care operations and that PC- APs can improve administrative and clinical functions and enhance FTE productivity at lower overall cost
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=1645044&dopt=r

Kashner TM.
Agreement between administrative files and written medical records: a case of the Department of Veterans Affairs.
Med Care 1998; 36(9):1324-1336.

Abstract: OBJECTIVES: This study examined the reliability of Department of Veterans Affairs' health information databases concerning patient demographics, use of care, and diagnoses. METHODS: The Department of Veterans Affairs' Patient Treatment files for Main, Bed-section (PTF) and Outpatient Care (OCF) were compared with medical charts and administrative records (MR) for a random national sample of 1,356 outpatient visits and 414 inpatient discharges to Department of Veterans Affairs' facilities between July 1 and September 30, 1995. Records were uniformly abstracted by a focus group of utilization review nurses and medical record coders blinded to administrative file entries. RESULTS: Reliability was adequate for demographics (kappa approximately 0.92), length of stay (agreement=98%), and selected diagnoses (kappa ranged 0.39 to 1.0). Reliability was generally inadequate to identify the treating bedsection or clinic (kappa approximately 0.5). Compared with medical charts, Patient Treatment Files/Outpatient Care Files reported an additional diagnosis per discharge and 0.8 clinic stops per outpatient visit, resulting in higher estimates of disease prevalence (+39% heart disease, +19% diabetes) and outpatient costs (+36% per unique outpatient per quarter). CONCLUSIONS: In the absence of pilot work validating key data elements, investigators are advised to construct health and utilization data from multiple sources. Further validation studies of administrative files should focus on the relation between process of data capture and data validity
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=9749656&dopt=r

Kirchner JE, Booth BM, Owen RR, Lancaster AE, Smith GR.
Predictors of patient entry into alcohol treatment after initial diagnosis.
J Behav Health Serv Res 2000; 27(3):339-346.

Abstract: To improve the quality of care for alcohol-related disorders, key transitions in the continuum of care, including treatment entry, must be fully understood. The purpose of this study was to investigate identifiable predictors

of patient entry into a substance-use treatment program following the initial diagnosis of an alcohol-related disorder on a medical or surgical inpatient unit. An administrative computerized database was used to identify the sample for this study. Inpatient and outpatient records were obtained from the Little Rock VAMC/DHCP. Predictors of patient entry into treatment within six months of the initial diagnosis of an alcohol related disorder included age younger than than 60 (odds ratio [OR] = 4.6), not married (OR = 1.7), primary diagnosis of an alcohol-related disorder (OR = 7.7), diagnosis of a comorbid drug (OR = 4.3) or psychiatric disorder (OR = 3.6), diagnosis by a medical as opposed to a surgical specialty (OR = 6.0), and African American (OR = 1.7)
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10932447&dopt=r

Leslie DL, Rosenheck RA.
Comparing quality of mental health care for public-sector and privately insured populations.
Psychiatr Serv 2000; 51(5):650-655.

Abstract: OBJECTIVE: This study examined the methodological difficulties of comparing quality of care in large health care systems. It demonstrated methods for measuring quality of mental health care and, using these measures, compared patients from Department of Veterans Affairs (VA) hospitals with privately insured patients. METHODS: Individuals receiving VA inpatient mental health care during the first six months of each fiscal year from 1993 to 1997 were identified from discharge abstracts. A similar cohort of privately insured individuals was identified using MEDSTAT's MarketScan database from 1993 to 1995. Individuals in both cohorts were tracked for six months after discharge. Length of stay, readmission rates, and access to outpatient services were calculated. RESULTS: The private sector outperformed VA on most quality measures, although differences were modest and can likely be explained by the greater severity of illness and social disadvantages of VA patients. Readmission rates increased considerably over time in the private sector, whereas they declined for VA patients. Quality measures varied by diagnosis, with VA performing better than the private sector in treating patients diagnosed with substance abuse and mental disorders not elsewhere classified but worse in treating patients diagnosed with depression. CONCLUSIONS: Although the private sector modestly outperformed VA on most quality measures, VA treats a more troubled population, and it improved markedly over time compared with the private sector. As health systems strive to reduce costs of care, methods for comparing and evaluating the quality of care become increasingly important. However, methodological challenges remain substantial
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10783185&dopt=r

Lloyd EE, Toth LL, Rogers S.
Development and testing of computer software for nursing assessment and care planning at a spinal cord injury center.
SCI Nurs 1994; 11(3):74-77.

Abstract: This paper describes a pilot project using a Macintosh personal computer and customized software to computerize nursing admission assessment and care planning data. The project setting is a 47-bed Spinal Cord Injury Center with two inpatient units and an outpatient department serving approximately 1,000 patients with spinal cord injury at a Department of Veterans Affairs Medical Center in northern California. The computer software development, implementation, and evaluation are described. This software (MacNursing) was found to be a low cost, customized approach to computerizing spinal cord injury admission assessment data and care planning which reduces repetitive writing and facilitates continuity of care. Personal computers and this software have provided the mechanism for establishing a spinal cord injury patient database
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=7792572&dopt=r

Menke TJ, Wray NP.
Use of a cost accounting system to evaluate costs of a VA special program.
Med Care 1999; 37(4 Suppl Va):AS45-AS53.

Abstract: BACKGROUND: The Department of Veterans Affairs (VA) established six mobile clinics to provide care for rural veterans. Each was operated by a parent VA Medical Center (VAMC). OBJECTIVE: To describe the use of a cost-accounting system which does not provide costs at the service or patient level to determine the costs of the mobile

clinics. RESEARCH DESIGN: Costs per visit were compared among the mobile clinics with the parent VAMCs and with simulated fixed-location clinics. Cost data came from VA's Centralized Accounting for Local Management (CALM) data. Utilization data came from VA's outpatient file. RESULTS: Information was obtained from the VAMCs' fiscal services to reallocate costs among the CALM subaccounts to generate cost data that was comparable among the mobile clinics. Costs per visit for the mobile clinics were twice as high as those of the parent VAMCs. Costs per visit would be lower at fixed-location clinics unless the volume were substantially less than that provided by the mobile clinics. CONCLUSION: Differences between cost allocations for accounting purposes and research are likely to necessitate adjusting cost accounting data for research purposes. Fortunately, information from the accountants or primary data can lead to a cost database which is appropriate for research evaluations. In the mobile clinics study, the analysis of cost accounting data led to the conclusion that mobile clinics were not a cost-effective way in which to provide care to rural veterans
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10217384&dopt=r

Mole L, Ockrim K, Holodniy M.
Decreased medical expenditures for care of HIV-seropositive patients. The impact of highly active antiretroviral therapy at a US Veterans Affairs Medical Center.
Pharmacoeconomics 1999; 16(3):307-315.

Abstract: OBJECTIVE: To identify any changes in expenditures and in morbidity and mortality with the progression of treatment of the HIV-seropositive population from monotherapy with a nucleoside reverse transcriptase inhibitor (NRTI) [1993] through dual NRTI therapy (1995) to highly active antiretroviral therapy (HAART) [1997]. DESIGN AND SETTING: This study retrospectively compared 3 separate years of the total expenditures encountered in the management of HIV-seropositive individuals seen at a US Veterans Affairs Medical Center. INTERVENTIONS: Utilising a computerised hospital database, we identified those patients with HIV-related International Classification of Diseases, version 9 (ICD-9) codes and collected all healthcare- related expenditure data. The 3 eras selected for comparison were controlled for similar utilisation of prophylaxis against opportunistic infections, access to investigational antivirals, consistency between primary care providers and distribution of new anti-HIV therapies relative to that era. Cost data for inpatient and outpatient activities (visits and admissions) were derived from actual expenditures. Major categories were then compared, including total inpatient/outpatient expenditures and utilisation, laboratory and prescription costs, and morbidity and mortality rates. MAIN OUTCOME MEASURES AND RESULTS: The 3 periods had similar patient populations, with 86, 86 and 82% of patients in 1993, 1995 and 1997, respectively, having some degree of immunosuppression (defined as CD4+ lymphocyte counts < 500 cells/mm3). Morbidity and mortality were not changed by the addition of dual NRTI therapy. HAART therapy produced 60 and 70% declines in relative mortality when compared with the single and dual NRTI eras. Dual NRTI or HAART therapy decreased overall expenditures as compared with NRTI monotherapy. HIV-related outpatient resource utilisation other than pharmacy and laboratory costs fell by 25 and 59% in 1997 as compared with 1993 and 1995, respectively. The greatest fall in resource utilisation was for inpatient bed-days of care, where the average cost per patient fell by $US2782 between 1993 and 1997. Pharmacy and laboratory expenditures increased by $US1825 and $US231 per patient from 1993 to 1997, respectively. Overall, the impact of HAART was a decrease of $US1193 in the average total cost per patient from 1993 to 1997. CONCLUSIONS: The introduction of HAART provided a positive outcome on patient morbidity and mortality and on medical centre expenditures. The end result was a cost shift of expenditures from inpatient utilisation to outpatient pharmacy and laboratory costs. This information is important for patients and providers, who need to make clinical decisions on lifelong therapies, and for healthcare financial planners, who need to predict inpatient and outpatient healthcare utilisation during an era of limited healthcare dollars
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10558042&dopt=r

Pfeil CN, Ivey JL, Hoffman JD, Kuhn IM.
Use of DHCP to provide essential information for care and management of HIV patients.
Proc Annu Symp Comput Appl Med Care 1991;146-149.

Abstract: The Department of Veterans' Affairs (VA) has reported over 10,000 Acquired Immune Deficiency Syndrome (AIDS) cases since the beginning of the epidemic. These cases were distributed throughout 152 of the VA's network of 172 medical centers and outpatient clinics. This network of health care facilities presents a unique opportunity to

provide computer based information systems for clinical care and resource monitoring for these patients. The VA further facilitates such a venture through its commitment to the Decentralized Hospital Computer Program (DHCP). This paper describes a new application within DHCP known as the VA's HIV Registry. This project addresses the need to support clinical information as well as the added need to manage the resources necessary to care for HIV patients
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=1807575&dopt=r

Pogach LM, Hawley G, Weinstock R, Sawin C, Schiebe H, Cutler F et al.
Diabetes prevalence and hospital and pharmacy use in the Veterans Health Administration (1994). Use of an ambulatory care pharmacy- derived database.
Diabetes Care 1998; 21(3):368-373.

Abstract: OBJECTIVE: To develop a diabetes registry from an outpatient pharmacy database to systematically analyze the prevalence of diabetes, patterns of glycemic medication and glucose monitoring, pharmacy costs, and hospital use related to diabetes care in the Veterans Health Administration (VHA) in fiscal year (FY) 1994. RESEARCH DESIGN AND METHODS: Veterans with diabetes were identified using a software program that extracted the social security number (SSN) of patients receiving insulin, sulfonylurea agents, or glucose-monitoring supplies. The cumulative FY94 cost for a drug was calculated by multiplying the units dispensed times the unit cost for each fill, using the actual drug cost that was in effect at the time of dispensing. Admission data were obtained by crossmatching the SSN registry with the VHA Austin Mainframe Patient Treatment Files to retrieve associated diagnosis- related groups (DRG), Physicians' Current Procedural Terminology (CPT), and International Classification of Diseases, 9th revision, Clinical Modification (ICD-9-CM) codes. RESULTS: From among 1,180,260 unique patients, 139,646 veterans with diabetes receiving insulin, oral agents, or glucose-monitoring strips were identified, accounting for a prevalence of 11.83% from 62 Veterans Administration medical centers. There were 63,078 individuals (52%) who received oral agents, of whom 26.3% also received blood glucose-monitoring supplies; 46,664 individuals (39%) received insulin, of whom 53.2% received blood glucose-monitoring supplies; and 9,440 individuals (8%) received both oral agents and insulin during FY94, with 64.4% receiving blood glucose- monitoring supplies. Only 1,482 (1.2%) individuals received monitoring supplies alone, and 129 patients (0.1%) were provided with an insulin pump. Using an adjusted data set, 12% of veterans accounted for 24% of all outpatient pharmacy costs, with an average expenditure of $622 for veterans with diabetes compared with $276 for veterans without diabetes. There was $454 (73%) for non-diabetes-specific prescriptions and $168 (27%) for prescriptions related to glycemic control. Of pharmacy expenditures for glycemic control, $101 (60.1%) was attributed to insulin, oral agents, and supplies, while $67 (39.9%) was attributable to glucose monitoring. Veterans with diabetes were admitted 1.6 times as frequently as veterans without diabetes. CONCLUSIONS: This study demonstrates the feasibility of using a pharmacy-based electronic diabetes database in a payor system that can track both claims and individual classes of medication based on a unique identifier number. While the prevalence of diabetes in the VHA is high relative to other health care systems and the general population, patterns of medication usage, pharmacy costs, and relative admission frequency are comparable to results from the private sector
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=9540017&dopt=r

Smith ME, Sheldon G, Klein RE, Feild T, Feitz R, Stockford D et al.
Data and information requirements for determining veterans' access to health care.
Med Care 1996; 34(3 Suppl):MS45-MS54.

Abstract: The Department of Veterans Affairs (VA) is responding to changing requirements for decision-support data by maximizing the value of data contained in VA and non-VA sources. The data are used to answer questions relating to the accessibility and utilization of VA and non- VA health services. Access studies require accurate estimates of the number of persons served and the number of persons who could be served. To derive these population estimates, VA employs census data to develop projections of the veteran population at the national, state, and county levels. Data from many surveys are used to supplement the census data. Access studies also require quantitative and qualitative data on the characteristics of VA and non-VA health care delivery systems at the national, state, and local levels. The Department of Veterans Affairs obtains health care system data from external sources, including the US Department of Health and Human Services, the American Medical Association, and the American Hospital Association, and from internal sources, including VA surveys and the VA administration inpatient and outpatient files. Utilization studies

need more detailed patient-level information than access studies. Data elements pertaining to the reason for health care encounters and the services rendered are obtained from survey data, the VA inpatient and outpatient administration files, the national Medicare database, and state Medicaid databases. The Department of Veterans Affairs' decision-support analyses for eligibility reform and health care system reform demonstrate the effectiveness of VA in analyzing data from many sources
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=8598687&dopt=r

Strauss WE, Alexis G, Tapley RD.
Use of a tiered review for evaluation of appropriate use of hydroxymethylglutaryl coenzyme A reductase-inhibitor therapy.
Clin Ther 1999; 21(2):422-429.

Abstract: Despite abundant evidence of the benefits of lipid lowering in reducing mortality from all causes in high-risk patients with or without coronary artery disease (CAD) and the wide availability of guidelines for targeting such patients more aggressively, there are indications that this population is still being treated suboptimally. Our study sought to ascertain the appropriateness of prescribing practices of the hydroxymethylglutaryl coenzyme A-reductase (HMG-CoA) inhibitor pravastatin that was used at our facility at the time. We conducted a drug utilization review of a randomly chosen sample of patients receiving prescriptions for pravastatin at the outpatient clinics of a tertiary care, academically affiliated Veterans Affairs medical center. The algorithm we used was based on National Cholesterol Education Program Adult Treatment Panel-2 guidelines. Patient charts were reviewed for the presence of CAD and standard cardiac risk factors and for lipid determinations performed since 1986, when laboratory test results began to be compiled electronically. The initial review was performed by a pharmacist; cases the pharmacist identified as involving possible suboptimal prescribing practices were subsequently reviewed and classified by a cardiologist. From the pharmacy database, we derived a random sample of 118 patients who were receiving doses >20 mg (high-dose cases) and 100 patients receiving doses of < or =20 mg (standard-dose cases). The pharmacist's review found 57 (48%) high-dose cases and 47 (47%) standard-dose cases that were questionable; the cardiologist's review of these cases determined that 43 (36%) high-dose cases and 38 (38%) standard-dose cases involved suboptimal prescribing practices. The deficiencies noted in patients receiving standard-dose pravastatin were generally minor; however, 23% of the deficiencies noted in patients receiving high-dose therapy were serious ones that may have exposed the patients to unnecessary therapy or caused a delay in their receiving appropriate therapy. In conclusion, slightly more than one third of a randomly selected sample of patients treated with an HMG-CoA reductase inhibitor at a tertiary care medical center were receiving suboptimal therapy. Suboptimal prescribing practices have both clinical and economic implications, and a tiered, multidisciplinary review process allows convenient monitoring of prescribing practices
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10211542&dopt=r

Szeto HC, Coleman RK, Gholami P, Hoffman BB, Goldstein MK.
Accuracy of computerized outpatient diagnoses in a Veterans Affairs general medicine clinic.
Am J Manag Care 2002; 8(1):37-43.

Abstract: BACKGROUND: Electronically available data, both administrative, such as outpatient encounter diagnostic data, and clinical, such as problem lists, are being used increasingly for outcome and quality assessment, risk adjustment, and clinical reminder systems. OBJECTIVE: To determine the accuracy of outpatient primary care diagnostic information recorded in administrative and clinical files in a Veterans Affairs VISTA (Veterans Health Information Systems and Technology Architecture) database compared with medical chart notes. STUDY DESIGN: Cross- sectional medical chart review of 148 patients attending a general medicine clinic at a university-affiliated Veterans Affairs hospital for 9 diagnoses relevant to the choice of drug therapy for hypertension. PATIENTS AND METHODS: An administrative file of encounter diagnoses, for a 2-year period, and a clinical file of the problem list maintained by the clinician were the sources of electronic diagnoses. We compared these sources with diagnoses abstracted by medical chart review. We estimated the sensitivity and specificity of each electronic data source for detecting medical chart note diagnoses. RESULTS: The sensitivity for 8 of the 9 study diagnoses was greater than 80% in the administrative file and 49% in the clinical problem list. The specificity was good for the administrative file (91% to 100%) and even better for the clinical file (98% to 100%). CONCLUSIONS: Outpatient encounter diagnoses relevant to hypertension recorded as electronic data had high specificity, and some codes had high sensitivity when

collected over multiple visits. The administrative file was more sensitive but less specific than the clinical file. Administrative vs clinical files can be selected to minimize either the false-negative or the false-positive designations, respectively, as dictated by the needs of the quality assessment review
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=11814171&dopt=r

Van Gils CC, Wheeler LA, Mellstrom M, Brinton EA, Mason S, Wheeler CG.
Amputation prevention by vascular surgery and podiatry collaboration in high-risk diabetic and nondiabetic patients. The Operation Desert Foot experience.
Diabetes Care 1999; 22(5):678-683.

Abstract: OBJECTIVE: To describe a unique multidisciplinary outpatient intervention for patients at high risk for lower-extremity amputation. RESEARCH DESIGN AND METHODS: Patients with foot ulcers and considered to be high risk for lower-extremity amputation were referred to the High Risk Foot Clinic of Operation Desert Foot at the Carl T. Hayden Veterans Affairs' Medical Center in Phoenix, Arizona, where patients received simultaneous vascular surgery and podiatric triage and treatment. Some 124 patients, consisting of 90 diabetic patients and 34 nondiabetic patients, were initially seen between 1 October 1991 and 30 September 1992 and followed for subsequent rate of lower-extremity amputation. RESULTS: In a mean follow-up period of 55 months (range 3- 77), only 18 of 124 patients (15%) required amputation at the level of the thigh or leg. Of the 18 amputees, 17 (94%) had type 2 diabetes. The rate of avoiding limb loss was 86.5% after 3 years and 83% after 5 years or more. Furthermore, of the 15 amputees surviving longer than 2 months, only one (7%) had to undergo amputation of the contralateral limb over the following 12-65 months (mean 35 months). Compared with nondiabetic patients, patients with diabetes had a 7.68 odds ratio for amputation (95% CI 5.63-9.74) ($P < 0.01$). CONCLUSIONS: A specialized clinic for prevention of lower-extremity amputation is described. Initial and contralateral amputation rates appear to be far lower in this population than in previously published reports for similar populations. Relative to patients without diabetes, patients with diabetes were more than seven times as likely to have a lower-extremity amputation. These data suggest that aggressive collaboration of vascular surgery and podiatry can be effective in preventing lower- extremity amputation in the high-risk population
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10332665&dopt=r

Weaver FM, Burdi MD, Pinzur MS.
Outpatient foot care: correlation to amputation level.
Foot Ankle Int 1994; 15(9):498-501.

Abstract: A retrospective analysis of Department of Veterans Affairs automated inpatient and outpatient records was performed for 3945 patients who underwent lower extremity amputation surgery due to peripheral vascular disease during fiscal year 1991. Demographic and clinical data were collected from reviewing patient database information for all Department of Veterans Affairs Hospitals nationwide. Patients were identified from the Physicians' Current Procedural Terminology codes for lower extremity amputations, and then divided into three groups (above the knee, below the knee, and foot and ankle) based on the most proximal level of amputation performed. Results indicate that increased use of designated foot care clinics was significantly associated with more distal level amputation surgery. Patients with above-the-knee amputations averaged 1.0 foot care clinic visit in the 2 years prior to amputation, whereas below-the-knee and foot and ankle amputees averaged 2.8 and 5.3 foot care clinic visits, respectively ($F[df = 2,3939] = 94.20$, $P < .05$). The same finding was noted when only users of foot care clinics were examined. Patients with a codiagnosis of diabetes were more likely to undergo distal amputation than those with other diagnoses ($P < .05$). The results of this study suggest the potential effectiveness of designated foot care clinics in preserving limb length in individuals with peripheral vascular disease and diabetes
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=7820243&dopt=r

Wilt TJ, Cowper DC, Gammack JK, Going DR, Nugent S, Borowsky SJ.
An evaluation of radical prostatectomy at Veterans Affairs Medical Centers: time trends and geographic variation in utilization and outcomes.
Med Care 1999; 37(10):1046-1056.

Abstract: OBJECTIVE: To examine temporal trends and geographic variation in utilization of radical prostatectomy (RP) as well as 30-day mortality and complication rates. DESIGN: Administrative data-base study of radical prostatectomy (RP) using the Department of Veterans Affairs Patient Treatment File and Outpatient Clinic File between 1986 to 1996. Logistic regression was used to estimate temporal and geographic effects on the use of RP. SETTING: All Departments of Veterans Affairs Medical Centers (VAMC) in the contiguous United States. PATIENTS: Men aged 45 to 84 years who underwent RP at a VAMC (n = 13,398). MAIN OUTCOME MEASURES: Number and utilization of RP, rate of 30-day mortality, major cardiopulmonary or vascular complications, and colorectal injuries requiring surgical repair within 30 days of RP. RESULTS: From 1986 to 1996, the annual number of RP at VAMCs (range, 695-1,545 RP) more than doubled, and the rate of RP at VAMCs per male VA user increased by 40% (range, 48/100,000-66/100,000). After controlling for age and year, the utilization of RP in West North Central, Mountain, West South Central, and Pacific census divisions was 70%, 14%, 10%, and 8% higher, respectively, whereas the utilization of RP in New England, East North Central, and Mid-Atlantic divisions was 38%, 31%, and 25% lower, respectively, than the rest of the nation ($P<0.001$). Geographic variation in utilization decreased during the period between 1986 and 1996, but a twofold difference in RP utilization in 1996 remained between high- and low-utilization divisions. Major cardiopulmonary complications, vascular complications, and colorectal injuries occurred in 1.7%, 0.2%, and 1.8% of men, respectively. Thirty-day mortality was 0.73%, declined from 1986 to 1996, and was associated with a history of diabetes and congestive heart failure. CONCLUSION: Utilization of RP at VAMCs increased over time and varied across geographic areas. Thirty-day mortality was less than 1% and decreased with time. Differences in utilization may be caused by uncertainty regarding the effectiveness of early detection and treatment of prostate cancer
http://www.ncbi.nlm.nih.gov/htbin-post/Entrez/query?db=m&form=6&uid=10524371&dopt=r